

# **ELECTRONICALLY SCANNED OPTICAL COHERENCE TOMOGRAPHY WITH FREQUENCY MODULATED SIGNALS**

## **ABSTRACT**

An improved Optical Coherence Domain Reflectometry (OCDR) system is  
5 provided. One embodiment of this OCDR system outputs a detector signal carrying  
image depth information on multiple modulation frequencies, where each modulation  
frequency corresponds to a different image depth. The image depth information from the  
detector signal may be resolved by tuning to the desired modulation frequency. Another  
system for imaging body tissue uses multiple frequency modulators such that the light  
10 beam does not travel from an optical fiber to free space.